

REMARKS

Claims 1-15 are pending in this application. Claims 5, 7, 8, 10, and 14 have been withdrawn from consideration. By this Amendment, claims 1 and 7 are amended and claim 15 is added. Support for the amendments and the new claim may be found, for example, in the specification at page 5, lines 13-29 and page 9, lines 12-18 and Figs. 1-6. No new matter is added.

In view of the foregoing amendments and the following remarks, reconsideration and allowance are respectfully requested.

I. Rejection Under 35 U.S.C. §102

The Office Action rejects claims 1 and 6 under 35 U.S.C. §102(b) over WO 98/13882 to Van Andel et al. ("Van Andel") as evidenced by U.S. Patent No. 4,243,432 to Jordan et al. ("Jordan"). Applicant respectfully traverses the rejection.

Claim 1 recites, *inter alia*:

A process for manufacturing a solar cell foil comprising: providing an etchable temporary substrate; applying a front electrode of a transparent conductive oxide (TCO) onto a first side of the temporary substrate ... wherein in any one of the preceding steps after application of the TCO, the thickness of the temporary substrate is reduced by etching part of the temporary substrate, subsequently applying an etch resist on a second side of the temporary substrate opposite to the first side of the temporary substrate covering the interconnect

Van Andel, even when evidenced by Jordan, does not disclose each and every feature of claim 1.

The Office Action asserts that Van Andel discloses the majority of the features recited in claim 1. *See* Office Action, pages 3-4. The Office Action then applies Jordan as supporting that a portion of the metal substrate in Van Andel at the front groove would implicitly be removed so that two adjacent stripes are electrically isolated from one another to avoid a short circuit. *See* Office Action, page 5. However, Van Andel does not disclose that the thickness of a temporary substrate can or should be reduced by etching part of the

temporary substrate, as recited in claim 1. For example, Van Andel merely discloses that etching may be used to remove portions of a layer, such as to create stripes. *See, for example, Van Andel, page 14, lines 1-20.* Thus, Van Andel merely discloses etching to completely remove portions of a layer, but Van Andel does not disclose that etching can or should be used to reduce the thickness of a layer, let alone that the etching to reduce the thickness of the temporary substrate can or should be conducted after applying the TCO and before applying an etch resist. Accordingly, Van Andel does not disclose each and every feature of claim 1.

For at least the above reasons, Van Andel does not anticipate claim 1. Claim 6 depends from claim 1 and likewise is not anticipated. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejections Under 35 U.S.C. §103

The Office Action variously rejects claims 1-4, 6, 9, 11, 12, and 13 under 35 U.S.C. §103(a) over Van Andel alone and in combination with one or both of Jordan and U.S. Patent No. 5,637,510 to Morikawa et al. ("Morikawa"). Applicant respectfully traverses the rejections.

The Office Action applies Van Andel as it was applied in the rejection under 35 U.S.C. §102(b). Thus, the Office Action asserts that Van Andel discloses, or would have rendered obvious, each and every feature recited in claim 1. However, as discussed above, Van Andel does not disclose each and every feature recited in claim 1. Further, Van Andel does not provide any reason or rationale for one of ordinary skill in the art to have modified the process disclosed in Van Andel to have included a step of reducing the thickness of a temporary substrate by etching part of the temporary substrate, and to have conducted the thickness reducing etching after the application of the TCO and before applying an etch resist on a second side of the temporary substrate, as recited in claim 1.

Particularly, as discussed above, Van Andel does not disclose that etching can or should be used to reduce the thickness of a temporary substrate. Further, Van Andel does not provide any reason or rationale for one of ordinary skill in the art to have known that the thickness of the temporary substrate may need to be reduced or that the thickness of a temporary substrate can or should be reduced by etching with any reasonable expectation of success. For example, Van Andel does not disclose how one of ordinary skill in the art would go about reducing the thickness of the temporary substrate by etching, at least because Van Andel only discloses removing entire portions of a layer by an etching process. Put differently, Van Andel does not teach, suggest, or otherwise provide any reason or rationale for one of ordinary skill in the art to have reduced the thickness of a temporary substrate by an etching process. Thus, Van Andel also would not have rendered obvious at least this feature of claim 1.

The Office Action asserts that Morikawa discloses, "A method of selective etching of a temporary substrate of a solar cell wherein a permanent etch resist is utilized to etch away the portion of the substrate which is not covered by the etch resist." Office Action, page 10 (citing Morikawa Fig. 1 and col. 4, lines 20-35). However, like Van Andel, this portion of Morikawa merely discloses etching an entire portion of a supporting substrate down to an insulating film and does not disclose reducing the thickness of a temporary substrate by etching. Thus, like Van Andel, Morikawa does not teach, suggest, or provide any reason or rationale for one of ordinary skill in the art to have known that the thickness of a temporary substrate may be reduced by etching, or that the thickness of a temporary substrate should be reduced by etching after applying a TCO and before applying an etch resist, as recited in claim 1. Thus, Morikawa does not address the above discrepancy of Van Andel as to claim 1.

Jordan does not address, nor is it applied to address, the above discrepancy of Van Andel and Morikawa as to claim 1. Thus, Van Andel, Morikawa, and Jordan,

individually or in any combination, would not have rendered obvious each and every feature of claim 1.

For at least the above reasons, Van Andel, Morikawa, and Jordan, individually or in any combination, would not have rendered claim 1 obvious. The remaining claims variously depend from claim 1 and likewise would not have been rendered obvious. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

III. New Claims

New claim 15 is presented. New claim 15 is directed to "A process for manufacturing a solar cell foil" having features that are similar to claim 1, and claim 15 recites, *inter alia*, "... the protective cap extends beyond the interconnect at both sides." Applicant respectfully asserts that Van Andel, Morikawa, and Jordan, do not disclose, and would not have rendered obvious, at least this additional feature of claim 15. Accordingly, prompt examination and allowance of claim 15 are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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